
9 Income Assistance and Employment Creation through Public Works in Korea

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Instruction

Public expenditure on labor market programs was almost negligible in Korea before the financial crisis in the winter of 1997. Throughout the 1990s, Korea spent less than 0.1 % of GDP on these programs, one of the lowest rates in the OECD. The relatively small amount of spending reflects the low level of unemployment (OECD, 1998, p. 148). Compressed industrial transformation in Korea has constantly created new jobs in the nonagricultural sectors of the economy, and as a result Korea was accustomed to near full employment for several decades. This picture has significantly changed after the crisis. The growth in employment was radically reversed by the severe economic recession in 1998. Due to the recession the unemployment reached 6.8 % in 1998, and 6.2 % in 1999. Although still lower than the average OECD spending, Korean public expenditure on unemployment measures expanded to 1.26 % of GDP in 1998, and to 1.87 % in 1999 (Jeong *et al.*, 2000).

One notable feature of Korean public spending on unemployment measures was that it struck a balance between passive income support and more active measures¹ that were designed to improve access to the labor market for the unemployed and to improve the employment situation. Except for a few countries, the share of spending on passive measures was far larger than that on active measures in most OECD countries. On the one

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¹ For analytical and policy purposes, the OECD splits public spending on labor market programs into 'active' and 'passive' measures. Active measures comprise a wide range of policies aimed at improving labor market access for the unemployed and the employment situation, job-related skills and the functioning of the labor market (Martin 1998).

hand, it is a promising sign that Korea is in line with the general principle of shifting public resources from income support to active labor market policies, a shift that has been endorsed by many Labor Ministers in developed countries (Martin 1998). On the other hand, however, social assistance programs in Korea are in general underdeveloped, with numerous cut-off levels for eligibility and restrictions in entitlements. As Korea lacked broad based social assistance programs, the situation was quickly reached where Korea had to accommodate a number of the unemployed who were not eligible for unemployment and at the same time not sufficiently poor enough to be covered by livelihood protection programs.

It is in this context that public works projects emerged as a crucial unemployment measure in the overall system of income support and social protection. In 1998, over 1 trillion won was poured into the projects, and in 1999, about 2.5 trillion won (Lee 1999). Although officially classified as an active measure, these schemes mostly played an important role as complementary income support in Korea. Even in developed countries it is a common phenomenon that many active measures tend to become inadvertently 'passive' during periods of high and persistent unemployment as there is more emphasis on the social objectives of the projects than on their efficiency objectives (OECD 1998). This is the reason that Korean public works projects should not be solely evaluated based on the net effects of programs on aggregate employment and unemployment. This research therefore attempts to evaluate the distribution effects of the projects as well as employment effects.

As some projects hastily made by the unprepared municipalities were not always effective or useful to the public, the private sector was increasingly critical of the projects, regarding them as "unnecessary make-work".² Actually, most evaluations show that subsidized employment schemes are ineffective due to considerable dead-weight, displacement and substitution effects (OECD 1998). However, the system-wide effects of the public works projects, which were not easily measurable, could be more beneficial than expected. The projects boosted and created effective demand, and provided much needed services to the disabled, the elderly and children of low-income families. Thus whether the projects bear beneficial outcomes, along with unexpected externality effects, is also investigated in this paper.

The remainder of this paper is organized as follows. The next section provides a detailed description of Korean public works projects. It is followed by sections that seek to advance an analytical discussion regarding the various dimensions of project evaluation, and explanations of the research methods utilized to conduct project evaluation. The majority of

² New Deal emergency relief projects were similarly criticized in the U.S. For more information on this issue, see Rose (1994). She argues that inefficiency was built into the public works projects because these projects were mandated to use a maximum of human labor and a minimum of machinery.

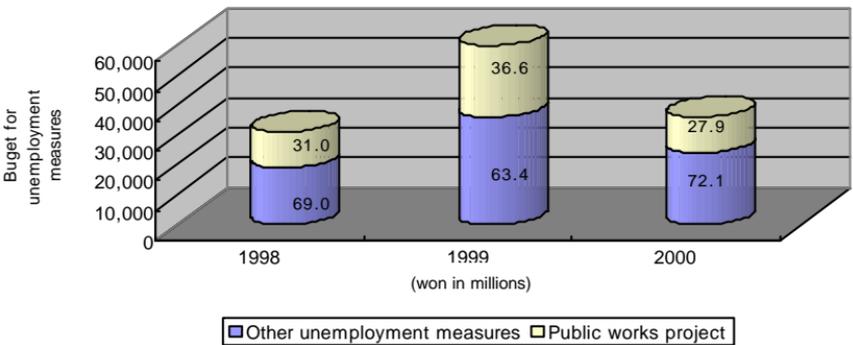
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empirical work in the result section is devoted to the impact of project participation on individual workers, but it also briefly engages in a broader discussion of project effects on the national economy. In the final Section, we conclude this study by recapitulating the findings and discussing future policy agenda, with special emphasis on their relationship with the Basic Livelihood Security System for the Nation to be enacted in October 2000.

Project Profile

Public works projects were implemented as a two-stage project in 1998 (Phase I: from May to August; Phase II: from September to December), and as a four-stage project in 1999 (Phase I: from January to March; Phase II: from April to June; Phase III: from July to September; Phase IV: from October to December). As shown in Figure 9. 1, the projects consumed a substantial portion of the entire budget for unemployment measures. The public works projects generated about 400,000 jobs on average during the year 1999.

Figure 9.1: Budget for public works projects in Korea, 1998-2000



In general, the public works projects fell into four broad categories. Infrastructure works (*kongkong saengsansung*) projects involved forestation, new construction of small public facilities such as community parks, and repairing public property. Public service (*kongkong service*) projects provided temporary workers to public organizations and community welfare service centers. These public workers engaged in a variety of activities, which ranged from managing cultural assets in national museums to teaching children from low-income families in after-school classes. Maintenance (*Hwankyung Chunghwa*) projects were mainly composed of such activities as garbage collection and lawn maintenance in national parks,

snow removal, and street cleaning. Information Technology (*Chungbohwa*) projects, added to the public works programs in 1999, can be classified as professional or nonmanual projects. Relatively young and educated workers were included in this category, and they mostly constructed database, and provided assistance on resolving the year 2000 computer problems.

In 1998, those who wanted to participate in the programs had to be unemployed persons between 15 to 65 years old. In Phase II of 1999, age restrictions were tightened to include only those between 18 to 60 years old, which brought about wide-spread complaints from the old unemployed about the selection procedure. At last, those between 61 to 65 were allowed to participate as long as they were within the 5 % of the total selected participants in Phase III of 1999. Selection criteria are different depending on the skills and credentials required by the particular projects. But priorities were given to the head of the household, those in their prime working age, i.e., 30 to 55 years old, and the poor unemployed. Since Phase III of 1999, screening decisions have been made based on the aggregated scores given to the following 9 factors: age, householder status, number of dependents, assets, female householder status, handicapped, duration of unemployment, the first-time participant status, and household income.

Changes in wage rates for the public works projects are shown in Table 9. 1. There were no differentials in wages by sex or by age. At the end of Phase II 1998, wage rates were highest, paying about 35,000 won per day to those performing professional work, and 25,000 won to low-skilled manual workers. Determination of the wage rates was controversial process as the business sector argued for lower rates. This criticism has led to the reductions of wage rates, once in Phase II of 1998, and again in the beginning of the Phase I 1999. These rates were maintained through Phase I 2000. As wage rates had been reduced, the projects began to attract more and more disadvantaged workers in the regular labor market. Table 9. 2 demonstrates this point. Women, less educated, and older workers dominated the projects by the end of the Phase IV, 1999.

Table 9.1: Changes in wage rates for public works projects in Korea

	1998 Phase	1998 Phase	Oct. 1, 1998	1999
	(won)			
Low-skilled office work	20,000	22,000	22,000 or less	19,000 or less
Manual labor	25,000	25,000	22,000 or less	19,000 or less
Labor-intensive manual Labor		30,000	27,000 or less	24,000 or less
Professional work		35,000	32,000 or less	29,000 or less

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Table 9.2: Characteristics of the public works project participants in Korea, 1998-1999

	1998		1999			
	Stage 1	Stage 2	Stage 1	Stage 2	Stage 3	Stage 4
	(%)		(%)			
<i>Sex</i>						
Male	67.7	57.0	58.7	50.5	45.6	44.0
Female	32.3	43.0	41.3	49.5	54.4	56.0
<i>Education</i>						
Primary school or less			37.4	36.0	34.7	40.0
Middle school or dropouts			22.3	23.3	21.3	22.3
High school or dropouts			27.2	27.3	27.1	24.1
2-year college or dropouts			5.0	4.9	6.1	5.1
University dropouts or higher			8.0	8.5	10.7	8.5
<i>Age</i>						
Under 20	1.2	0.7	1.0	0.9	1.3	1.2
20 – 29	12.0	8.8	11.6	13.5	16.0	13.0
30 – 39	20.7	19.6	22.7	21.4	18.8	16.6
40 – 49	26.1	26.9	32.4	30.4	27.2	26.2
50 – 59	27.6	30.6	27.4	22.5	29.0	37.3
60 – 65	12.4	13.4	5.0	11.2	7.8	5.8

Principle Objectives of the Public Works Projects

Public works projects in Korea have not simply been job creation programs. As in other debt-stricken developing countries, poverty as well as unemployment became a much greater problem. This problem was exacerbated by the fact that Korea lacked a pure income maintenance program for the unemployed. The Korean government expanded the existing livelihood protection programs³ in order to provide temporary relief for the unemployed that did not qualify for unemployment insurance. In order to be eligible for the original program, one should have income less than 230 thousand won per month, must pass an asset test, and must have no family that can support them. This program was mostly for those who were unable to work, such as the handicapped, elderly, and children. The temporary livelihood protection program eased some of its strict means-test criteria to cover additional people, however, it is still too limited in its coverage and generosity to complement unemployment insurance and to substitute for

³ Korea introduced social assistance long before it introduced programs of universal social insurance. A case in point is the livelihood protection program, created by livelihood protection act in 1961.

unemployment assistance. Among those covered under the program, more than two-thirds were classified as the “self-supported,” for whom cash benefits were not available except during winter.

Thus the expanded public assistance scheme in Korea was not well equipped to function as an ultimate safety net of income support for the newly unemployed. This was the reason that the public works projects had to offer short-term income opportunities to those newly unemployed. Therefore whether the public works projects actually cover the major target groups with high unemployment risks,⁴ especially the low skilled, the long-term unemployed, and the poorly unemployed heads of the household is an important indicator that measures the distribution effect of the public works projects. It is also necessary to explore the economic status of women participants, as they were frequently suspected of being economically inactive people who were not eligible for the projects. If these participants turn out to be the actually unemployed, and non-beneficiaries of the other unemployment measures, the distribution effect of the program can be more positively evaluated.

The major goal of the direct employment creation projects was to increase the available number of jobs while satisfying the needs that were not met by the private sector. To put it otherwise, public sector job creation should not compete with or substitute for existing jobs. Although the direct effect on employment creation seemed significant, the literature on labor market policy and evaluation (Forslund and Krueger 1994; Calmfors 1994) has cautioned that the net impact of job creation, that is, gross impact minus deadweight, displacement and substitution effects, could be much less than expected. Furthermore, public sector job creation could produce indirect employment effects that may or may not be favorable for labor market outcomes of project participants. In order to assess such net impact of public works projects on job creation, the following concerns must be fully explored.

First of all, labor market outcomes for participants are not always positive. Participation in the projects may stigmatize them, reducing reemployment opportunities and future earnings. Second, the net employment generated by a public employment program decreases in proportion to the incidence of deadweight losses, or fiscal substitution,⁵ such as when a local administra-

⁴ Freedman (1990) explains why public employment programs often fail to meet the eligibility requirements as follows. First, those who suffer the most serious economic and educational disadvantages may be the most difficult to reach for reasons of access to information about and personal attitudes towards the programs. Second, programs and project organizers are often concerned with producing results that look good on paper, and may tend to favor participants who are likely to fare well in the programs. Third, where programs offer employers a subsidy to hire members of the target group, it is likely that “creaming” will occur, i.e., employers will seek to minimize their risks by selecting those participants who appear better qualified.

⁵ Schmid (1996) argues that whereas efficiency is always impaired by deadweight effects,

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tion takes advantage of a federal subsidy to create a job that administration would have created otherwise (Erhel *et al.*, 1996). Such an effect is only indirectly investigated in this study. Programs targeted on the disadvantaged would be less vulnerable to fiscal substitution because these target group workers are seldom qualified to do a job that required regular employees. Third, the employment creation effects of the public works projects diminished if the projects made participants continuously dependent on the projects. This problem is called the *locking-in* effect. It is therefore necessary to investigate whether participants want to continue their participation and how long the participation would last. Finally, subsidized employment schemes such as public works projects may have a number of objectives other than creating additional jobs. They may enhance effective labor supply by helping individuals to keep in contact with the world of work, thus maintaining their motivation and skills (OECD, 1998). Again, this effect cannot be directly measured, but it is necessary to investigate whether project participation enhances willingness to work by surveying the attitudes of the participants.

Research Methods

The empirical research reported in the following section was based on a survey of project participants, conducted during September-October 1999. The sample for this survey consists of adults who participated in the public works projects during 1998 and 1999. Respondents were sampled with a multi-stage cluster sampling procedure. The integrated list of those who participated in central government projects in 1998 was not available, so they are excluded. This exclusion should not lead to a serious bias in analyzing the data, as public works projects in general were most extensively implemented in 1999, and a majority of participants worked for local government projects. There were also no compelling reasons to believe that those who participated in 1998 central government projects differ significantly from those participated in 1999 projects.

Those who participated in 1998 local government projects were sampled based on local government participant lists, and those who participated in 1999 central and local government projects were sampled based on the lists obtained from the central employment information institution of the labor ministry. Among 1578 cases selected, a total of 1505 cases were collected via personal interviews conducted during the summer of 1999. Regional allocation of the samples are as follows: Seoul (274), Kyoungki (289), Inchon (52), Kangwon (84), Pusan (144), Ulsan (33), Southern Kyungsang

displacement and substitution might be intentional. Preferential treatment for one person at the cost of another—promoting women at the cost of men, long-term employed at the cost of short-term employed—can be an explicit social policy.

(107), Taegu (105), Northern Kyungsang (113), Taejon (50), Southern Chungchung (94), Northern Chungchung (45), Kwangju (48), Southern Cholla (80), Northern Cholla (60). Since it was virtually impossible to form a benchmark or control group of individuals who did not participate in the projects, we were not able to directly judge and compare earnings and employment outcomes of the participants against non-participants.

Data Description

Table 9.3 shows that overall, men accounted for 45 %, and women 55 %, of respondents, which closely reflects the characteristics of population reported in Table 9.2. However, younger participants were overrepresented, and older participants were underrepresented in the sample. The mean age of respondents was slightly over 42 years. Similarly, highly educated participants were overrepresented, especially those who were college graduates. Those who held the legal head of the household status were 50 % of respondents. The mean household size was 3.5 persons. For those married only, about 56 % of respondents had unemployed spouses.

Participation in public works projects has grown rapidly since the beginning of 1999. The projects were most extensively implemented during Phase I and Phase II of 1999. During that time, the number of unemployed, employed, and economically inactive respondents was subsequently reduced. A large number of respondents (66.8 %) participated in public works projects run by the local governments, and only 6.4 % of respondents participated in the central government information technology projects in 1999. About 27 % of the respondents participated in other central government projects in 1999. A majority of respondents (78.4%) participated in the projects to support a family. A majority of respondents participated in the projects just once or twice, and when they participated in the projects, they seldom quit the projects.

Results

Income Assistance: distribution effects

Although half of the respondents own houses, the average monthly household income of all respondents was just 950 thousand won (Table 9.4). Considering that the average household size was 3.5 persons, this amount was close to the poverty line. The minimum cost of living for a household with 4 persons was 930 thousand won in 1999.

The public works projects have received a great deal of criticism due to women participants not being considered eligible for the projects. The survey results in Table 9.5 demonstrate that these women came from

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economically disadvantaged households, where almost half of them (44.3 %) were major breadwinners and half of those married women's husbands were unemployed.

Table 9.3: Descriptive statistics for survey respondents' characteristics (total =1505)

Characteristics	(%)
<i>Sex</i>	
Male	45.0
Female	55.0
<i>Age</i>	
Age 20 ⁻	1.0
Age 21 to 30	27.2
Age 31 to 40	15.3
Age 41 to 50	23.1
Age 51 to 60	28.2
Age 60 ⁺	5.1
Mean age (SD)	42.1(13.2)
<i>Schooling</i>	
Elementary School	32.1
Middle School	16.9
High School	20.9
College or university	30.0
<i>Family status</i>	
Head of the household	50.0
Dependent	50.0
Mean size of household (SD)	3.5(1.4)
<i>Marital status</i>	
Married	54.0
Never married	30.0
Separated, divorced, widowed, etc.	16.0
<i>Employment status of spouse (married only)</i>	
Regular worker	12.0
Atypical worker	22.6
Self-employed	6.1
Non-paid family worker	3.0
Unemployed	56.4

Table 9.4: Economic status of survey respondents

Characteristics	(%)
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<i>Housing</i>	
Own house	55.0
Chonse ¹⁾	22.0
Monthly rent	19.6
Other	3.2
<i>Major breadwinner</i>	
Respondent	51.8
Spouse	17.3
Parents	21.9
Child(ren)	5.4
Other family members	3.5
<i>Household income(won)</i>	
Monthly household income	950,000
Monthly household expenses	860,000
<i>Indebted</i>	
Yes	37
No	63
<i>Loan amount and payment (indebted only)(won)</i>	
Total amount	17,500,000
Monthly payment	170,000

Note: 1) A rent system in which the tenant pays a lump sum to the landlord and the tenant gets the money back when s/he leaves.

Respondents spent 4.97 months on average participating in public works projects from January 1998 to July 1999. On average, they were employed for 4.04 months, unemployed for 5.31 months, and economically inactive for 4.68 months. Those who were employed for less than a month amounted to 46.7 % of respondents, which reflects the harsh labor market conditions after the financial crisis. Those who were unemployed for less than a month amounted to 40.7 %, and economically inactive for less than a month 54.3 %. These figures imply that a portion of participants might not be the unemployed, and the projects might have activated previously economically inactive population. The proportion of economically inactive population did not significantly differ by sex and residence.

Only 15 % of respondents benefited from unemployment policies other than public works projects. The number of respondents who received NGO' s relief activities was even smaller, being just 31 persons out of 1505

Table 9.5: Economic status of survey respondents by sex

	Male	Female
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	(%)	
<i>Legal householder status</i>		
Head of the household	74.0	30.0
Dependent	26.0	70.0
<i>Major breadwinner</i>		
Respondent	61.0	44.3
Spouse	10.7	22.7
Parents	20.0	23.5
Child(ren)	4.2	6.5
Other family members	4.2	3.0
<i>Employment status of spouse</i>		
(Married only)		
Regular worker	8.8	15.5
Atypical worker	21.1	24.6
Self-employed/employer	5.1	7.3
Non-paid family worker	5.0	1.2
Unemployed	59.9	51.4

Table 9.6: Types of benefited unemployment policies (total=248)

Characteristics	(%)
Livelihood protection program	54
Unemployment insurance	1
Vocational training	43
Loan schemes for the unemployed	1
Tax exemption	0
Others	1

respondents. A majority of the beneficiaries of government unemployment measures have participated in either livelihood protection programs or vocational training programs. Table 9.6 demonstrates that most public works project participants have not been benefited from other unemployment measures. In sum, the public works projects did appear to help those who needed social protection due to a sudden and massive upsurge of unemployment and poverty.

Job Creation: Labor Market Outcomes

A large number of project participants were previously atypical workers, such as daily, temporary, or non-paid family workers. By occupation, they

were also predominantly unskilled manual workers (Table 9.7). This table also illustrates that the employment structure of those 399 workers who found jobs after the project participation remained surprisingly similar to the employment structure shown before project participation. About 42 % of respondents answered that the compensation and working conditions of their current jobs were worse than their previous jobs, whereas only 18 % experienced improved compensation levels and working conditions in their current jobs. It suggests that the project participants had to face harsher labor market situations as a result of the financial crisis, and they took jobs that were inferior to their previous ones instead of lingering on the public works projects.

Respondents' desired job characteristics, however, were significantly different from respondents' previous job characteristics and the current employment structure of those who were able to find jobs. Almost 80 % of respondents who are searching for employment prefer to have a regular job, whereas only 34 % of respondents who were previously employed had regular jobs. Their desired wage rate (96 thousand won) was much higher than the rate of those who found jobs after the project participation (70 thousand won). The respondents' strong desire to have a regular job is to a certain degree related to the fact that these projects were designed to be implemented for a relatively short period of time, i.e., two and a half months, in order to provide stronger incentives for job search activities.

Logistic regression coefficients for regression of job attainment after public works project participation on several independent variables are reported in Table 9.8. The regression equation for the model reveals that male workers, younger workers and major breadwinners in the households were more likely to attain jobs after participating in the projects. Compared to the manual labor workers, those participated in the DB construction, mainly low-skilled white-collar workers were less likely to find jobs. Workers who were unsatisfied with working conditions, wage rates, labor intensity, and project duration were more likely to find jobs. The table also shows that previous job experience certainly helped most workers to find jobs after participation, with the exception of those workers who had worked in white-collar jobs.

Table 9.7: Employment structure of those employed before and after PWP participation (total=before:750; after:399)

Characteristics	Before	After
	(%)	

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<i>Employment status</i>		
Regular worker	34	34
Temporary worker	22	23
Daily worker	31	30
Self-employed	9	8
Non-paid family worker	3	3
Dispatched worker	1	2
<i>Employment status</i>		
Full-time worker	81	80
Part-time worker	19	20
<i>Occupation</i>		
First job		17
Same as previous job		45
Different from previous job		38
<i>Compensation and working conditions</i>		
Better than previous job		18
Same as previous job		39
Worse than previous job		42
<i>Industry</i>		
Manufacturing	22	17
Construction	16	18
Service	11	17
Hotels and restaurants	12	9
Agriculture, forestry, etc.	9	9
Other	30 ¹⁾	28 ³⁾
<i>Type of worker</i>		
Unskilled manual worker	41	37
White-collar worker	14	18
Skilled manual worker	12	10
Service worker	13	11
Other	20 ²⁾	24 ⁴⁾
<i>Monthly wage (won)</i>	870,000	700,000
(SD)	(738,100)	(374,400)

Notes: 1) Wholesale/retail repair service (6%), educational service (5%), housekeeping service (4%), public administration (3%), transport distribution and telecommunications (3%), Finance and insurance (3%), social welfare (2%), fishery (1%), public utilities (1%), real estate (1%).

2) Technician (7%), skilled worker in agriculture and fishery (5%), expert (3%), machine operator (3%), high ranking manager (2%).

3) Educational service (5%), social welfare (5%), wholesale/retail repair service (5%), finance and insurance (3%), public administration (3%), transport, distribution and telecommunications (3%), real estate (2%), fisheries (1%), mining (1%).

4) Skilled manual worker (10%), expert (6%), skilled worker in agriculture and fishery (6%), expert, machine operator (2%)

Table 9.8: Logistic regression coefficients for regression of job attainment after PWP participation on selected independent variables

Independent variables	Logistic coefficients (SE)
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Gender (male=1)	.340 (.140)*
Age	- .048 (.008)***
Education	.087 (.062)
Breadwinner ¹⁾	.322 (.146)*
<i>Project types</i>	
<i>(Manual labor)</i>	
DB construction	- 1.122 (.308)***
Information technology	- .295 (.307)
Administrative assistant	- .204 (.235)
Educational activities	- .547 (.286)
Internship	- .153 (.394)
Welfare client assistant	.653 (.813)
Degree of overall satisfaction on PWP	- .033 (.020)
Degree of satisfaction on project management	- .036 (.016)*
<i>Previous job experience</i>	
<i>(no experience)</i>	
white-collar worker	.015 (.257)
Service worker	.599 (.245)**
Skilled manual worker	.661 (.259)**
Unskilled manual worker	.704 (.172)***
Other	.683 (.207)***
(Constant)	.317 (.462)
-2log likelihood	1570.576
Chi-square	133.584***
Degree of freedom	17

Note: 1) Breadwinner is a dummy variable coded 1 if the respondent is the major breadwinner in the household.

*p<0.05, **p<0.01, ***p<0.001

When respondents searched employment, they frequently relied on personal networks and local newspaper advertisements, instead of using institutionalized services such as local labor offices or public employment centers for daily workers (Table 9.9). Respondents also answered that they had difficulties in finding jobs because there were few job openings, inadequate job information, and age discrimination. Naturally, among 1196 respondents who have not yet been employed or are currently working in the projects, about 81 % (967 respondents) answered that they wanted to participate in the projects in the future. A majority (60 %) of those respondents who answered positively on this question wanted to participate in the projects until they ceased to exist. Particularly, women, older, and less

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educated workers were more inclined to participate in the projects instead of searching for jobs. It clearly indicates that those workers who are not easily sellable in the labor market might develop a tendency to depend on the projects for a long time.

Table 9.9: Job search methods of survey respondents

Characteristics	(%)
Personal network	26.8
Newspapers, TV ads., etc	21.4
District (Local) newspapers	14.6
Pay a visit to workplaces	10.3
Internet search	9.7
Local labor office	6.6
Manpower bank	4.2
Public employment center for daily workers	2.8
PWP workplaces	2.1
Private employment service center	1.4

Attitude Survey on Project Implementation and Future Direction

The respondents' evaluation of the projects might not represent that of the whole population, but precisely because of that it could be more accurate. Table 9.10 shows that the project participants gave fairly positive answers to five items evaluating the projects. They rather strongly agreed on the fact that the projects provided "protection for the poor," and gave "opportunities to work for disadvantaged groups". Table 9.11 presents OLS coefficients for the regression of public works projects' evaluation on several independent variables. The dependent variable was calculated by averaging the scores on the items in Table 9.10. In general, women, older, less educated, and poorer workers were more satisfied with the projects. Frequent participants evaluated the projects more positively than one-time participants did. Those workers who had worked in information technology projects and those who had worked as administrative assistants were significantly more satisfied than participants in manual labor projects.

In general, respondents were satisfied with the administration of the projects. They were, however, not satisfied with wage rates and project duration. According to the survey results, 56 % of respondents believed that wage rates should be raised to meet the prevailing market wage for similar work, whereas only 3 % believed that wage rates should be lowered to increase the number of beneficiaries of the projects. Actually, as it was shown in Table 9.1, wage rates have been reduced twice, mostly due to the business sectors' complaints that high wage rates in public works projects were leading to labor shortages.

As public works projects have been implemented during the severe economic downturn, it was not likely that twice cut wage rates of the projects caused labor shortages or raised wage rates in the labor market. Some small and medium-sized firms with substandard working conditions that are known as 3D sector⁶ in Korea suffered from labor shortages, but they have experienced this problem for a long time. Even when these firms offered higher wages than the other firms did for a similar job, workers did not want to be employed in this sector because of their dire and unhealthy working conditions. If wage rates were lower than the current rates, the public works projects might have not been able to attract the unemployed heads of households who were the major target group for the projects. Manual public works project participants earn 500 thousand to 600 thousand won per month on average, which is below the minimum cost of living for a household with 4 persons.

Respondents also complained about the duration of the projects, which last less than 3 months. Although in some cases this period was too short to implement long-term projects, the short project period helped to pressure participants to find more secure jobs in the private sector.

Table 9.10: Five items measuring respondents' evaluation of public works projects

<i>For each of the following statements, please tell me if you strongly agree (2), somewhat agree (1), somewhat disagree (-1), or strongly disagree (-2) with it.</i>	Mean values
The public works projects helped the unemployed by Creating jobs	0.44
The public works projects provided welfare service to The community	0.62
The public works projects provided protection for the Poor	1.05
The public works projects encouraged the unemployed To keep in contact with the world of work	0.47
The public works projects provided opportunities to work For disadvantaged groups in the labor market	0.99

Table 9.11: OLS coefficients for the regression of PWP evaluation on selected independent variables (total number=1505)

Independent variables	OLS coefficients (SE)

⁶ Three D sector denotes workplaces where dirty, dangerous, and difficult jobs prevail.

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Gender (male=1)	-.932 (.222)***
Age	.058 (.011)***
Education	-.471 (.091)***
Householder ¹⁾	-.023 (.243)
Working spouse ²⁾	.328 (.216)
Monthly household Income	-.004 (.001)***
<i>Total number of program participation</i>	
(1)	
2	.734 (.216)***
3	.733 (.244)**
4	1.236 (.402)**
5	1.100 (.642)
<i>Previous Job Experience</i>	
(no experience)	
white-collar worker	-.369 (.386)
Service worker	.350 (.384)
Skilled manual worker	.567 (.388)
Unskilled manual worker	.332 (.242)
Other	.269 (.315)
<i>Project types</i>	
<i>(manual labor)</i>	
DB construction	.118 (.433)
Information technology	1.210 (.504)**
Administrative assistant	.792 (.360)**
Educational activities	.368 (.575)
Internship	-1.680 (1.391)
Welfare client assistant	.591 (.389)
Drop-out ³⁾	-.449 (.236)
(Constant)	2.847 (.707)***
Adjusted R ²	.200

Notes: 1) Householder is a dummy variable coded 1 if a respondent is the head of a household.

2) Working spouse is a dummy variable coded 1 if a respondent has a working spouse.

3) Drop-out is a dummy variable coded 1 if a respondent quit PWP before a three-month participation period is over.

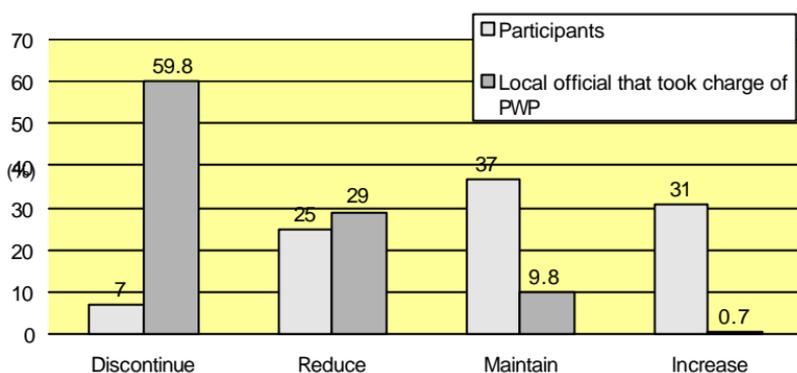
*p<0.05 , **p<0.01, ***p<0.00

Figure 9.2 demonstrates that respondents did not want the projects to be discontinued. This sharply contrasts with the response of the local officials who took charge of the projects, as 59.8 % of them want the program to be discontinued. In sum, the public works projects in Korea appeared to have produced two beneficial outcomes: they provided jobs for people who were unemployed or underemployed, and they provided much-needed economic and social services to the general public at both national and local administrative levels.

Although this paper does not aim to evaluate the cost-effectiveness of

each project, the public works projects in general seemed to provide many government services that people could not afford before. For example, the information technology projects helped to bring about the digital economy earlier than expected, and substantially improved the efficiency of administrative services by producing major databases for government documents. The two most fundamental principles guiding the implementation of the projects were (a) the labor market is not to be disturbed by the public works projects, (b) the projects should be labor intensive ones, with the budgetary constraint that the projects should use 50 to 70 % of the project funds only for labor costs. Considering that these principles were restraining conditions that naturally prohibit productivity and efficiency of the projects, the criteria that were used to evaluate the projects should not be so much focused on how successful they were in terms of generating profits.

Figure 9.2: Future direction of PWP



Note: The data for local officials come from a survey conducted by the KLI, in June 1999. The sample consists of 585 municipal officials who took charge of PWP. Respondents were sampled with a PPS (Probability Proportional to Size).

Summary and Policy Agenda

As an unemployment measure, whether the public works projects actually helped the unemployed has been the subject of much controversy. The findings of this research suggest that the projects might have activated some economically inactive population. However, about a half of women participants, who in general were erroneously considered as the economically inactive, turned out to be the major breadwinners in poor households. Furthermore, the average monthly household income of all respondents was close to the poverty line, which implies that the projects should even be

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considered as a successful poverty measure. Most project participants were also non-beneficiaries of other unemployment measures. All these strongly support the fact that the distribution effects of the projects are fairly positive.

Deadweight losses due to the public works projects were only indirectly inferred. As project participants were mostly low-skilled, less educated, and older workers, these workers were not expected to do jobs that required regular workers.

In addition, respondents spent just less than 5 months on average participating in the projects, brushing away concerns regarding the locking-in effects. A large majority of those participants who are disadvantaged in the labor market, however, responded that they would like to participate in the future, instead of searching for a job. Younger male workers and major breadwinners in the households were more likely to attain jobs after the project participation. A majority of project participants were previously atypical workers, and those workers who found jobs remained surprisingly similar to the employment structure shown before the project participation. Their new wage rates were however substantially lower than the average wage rates of respondents' previous jobs. It partly reflects the worsened labor market situation for these unskilled workers after the financial crisis.

According to the survey results, respondents were quite satisfied with the management and outcomes of the public works projects, except for wage rates and project duration. They strongly agreed with the statement that the projects provided protection for the poor, and gave opportunities to work for disadvantaged groups. Respondents therefore did not want the projects to be discontinued, which sharply contrasted with the response of the local officials, a majority of which wanted the projects to be discontinued. Respondents also preferred the public works projects to unemployment assistance, believing that the projects need to be expanded. The project outcomes bore fundamental limitations because the projects must put priorities in providing income assistance to the unemployed poor and thus in using a maximum of labor. Central government projects were in general more positively evaluated, as they were implemented with more supporting managerial manpower and more carefully prepared proposals. Among the central government projects, the forestation project and the project that ran after-school classes for the children of low-income families were among the most highly evaluated. Since one of the central principles of this public job creation scheme was that the private labor market is not to be disturbed by these projects, there were few externality effects that threatened the functions of the market.

These findings of the paper⁷ point to the following three policy recom-

⁷ This study only provided evidence on short-run outcomes, covering at best slightly more than 1 year after program participation. Much evaluation literature cautioned that this may well be too short a period for a full assessment of the private and social returns to public investment of many active measures (OECD 1998). Public works projects are still being implemented in Korea, and there is very little evidence on the long-term effects of these projects.

mentations.

First, the public works project should not be discontinued or drastically reduced. The projects have successfully played the role of a social safety net ever since unemployment rates skyrocketed. The projects especially benefited women, older, and less skilled workers who have been excluded from the other institutionalized unemployment measures, such as employment insurance and the loan schemes. Despite decreasing unemployment rates, rapid expansion of atypical employment is degrading the quality of working life, requiring immediate attention. The crucial policy dilemma here is that it has been extremely difficult to simultaneously attain flexibility in the labor market and social protection for workers. The projects need to be retooled to cater to the demands of the disadvantaged groups in the private labor market.

Second, it is vital to pay careful attention to the interactions between the public job creation scheme and other unemployment measures and related social welfare programs. The disadvantaged participants mentioned above have a tendency to be dependent on the projects perennially. This "unemployment trap" is particularly daunting for people whose chance of escaping from unemployment is to be underemployed, which could be worse than participating in the public works projects. In order to facilitate their job search process, the projects should develop a close linkage between them and public employment services and vocational training programs. Moreover, the projects also should be prepared to play a new role of workfare, especially after the enforcement of the Basic Livelihood Security System for the Nation. The System is expected to secure the basic livelihood for the low-income class earning less than the minimum cost of living, and at the same time, to provide self-support aid to those with the ability to work. In this system, the projects can be used as a work test in order to make many unemployed poor remain in contact with the labor market. In doing so, the projects should not degenerate into a vehicle to enable the unemployed to earn living expenses. Eventually, the projects should develop into a two-tiered system in which they can be utilized as both an active labor market policy for the relatively young and more educated unemployed, and as an effective workfare program for poor groups with greater barriers to the labor market.

Third, despite private sector discontent regarding the projects' wage rates, wage rates should not be lowered in order to maintain the participation of the major breadwinner. Further decline in wage rates also exacerbates the distributional effects of the projects. The project duration, which was intentionally designed to be very short in order to pressure participants to actively search for jobs, should be more flexible with a shift from one-month duration projects to yearlong duration projects.